Serial No. 09/020,716 Group Art Unit: 1638

encoding a high lysine content or high sulfur content seed storage protein or modified seed storage\protein of same and

- b) regenerating a transformed cereal plant from the transformed cell, wherein seeds from the transformed plant exhibit an elevated level of lysine or sulfur-containing amino acid compared to seeds of a corresponding non-transformed cereal plant.
- 76. The method of claim 75 wherein the transformed plant seed is from maize, wheat, rice, or sorghum.
 - 77. The method of claim 76 wherein the transformed plant seed is from maize or sorghum.
 - 78. The method of claim 75 wherein the polynucleotide encodes barley alpha hordothionin or soybean 2S albumin protein or modified proteins of same.
 - 79. A transformed cereal plant seed produced by the method of claim 75.
 - 80. A transformed cereal plant seed, the endosperm of which contains an elevated level of lysine or a sulfur-containing amino acid compared to a corresponding non-transformed seed.
 - 81. The transformed seed of claim 80 wherein the transformed plant seed is from maize, wheat, rice, or sorghum
 - 82. The transformed seed of claim 80 wherein the transformed plant seed is from maize or sorghum.

Serial No. 09/020,716 Group Art Unit: 1638

- 83. The transformed seed according to claim 80 wherein the amount of lysine or sulfur-containing amino acid in the seed is increased at least about 10 percent by weight compared to a corresponding non-transformed seed.
- 84. The transformed seed according to claim 83 wherein the amount of lysine or sulfur-containing amino acid in the seed is increased at least about 15 percent by weight compared to a corresponding non-transformed seed.
- 85. The transformed seed according to claim 84 wherein the amount of lysine or sulfur-containing amino acid in the seed is increased at least about 20 percent by weight compared to a corresponding non-transformed seed.
- 86. A food or feed product produced from the transformed seed of claim 80.
- 87. The food or feed product of claim 86 comprising meal, flour, grits, hominy, or porridge.
- 89. An expression cassette comprising a seed endosperm-preferred promoter operably linked to a structural gene encoding a seed storage protein or a modified seed storage protein having an elevated level of lysine or methionine.
- 90. The expression cassette according to claim 89 wherein the promoter is a gamma zein promoter or a waxy promoter.
- 91. A vector comprising the expression cassette of claim 89.

Serial No. 09/020,716 Group Art Unit: 1638

- 92. A plant cell transformed with the vector of claim 91.
- 93. A transformed plant comprising the vector of claim 91.
- A transformed seed from a cereal plant which has been transformed to express a 94. seed storage protein or a modified seed storage protein in the endosperm of the seed, wherein the seed exhibits and elevated level of lysine or a sulfurcontaining compound compared to a non-transformed seed.

Remarks

Reconsideration of the present application is respectfully requested.

Respectfully submitted, Macianic B Much

Marianne H. Michel

Attorney for Applicant(s)

Registration No. 35,286

PIONEER HI-BRED INTERNATIONAL, INC.

Corporate Intellectual Property

7100 N.W. 62nd Avenue

P.O. Box 1000

Johnston, Iowa 50131-1000

Phone: (515) 334-4467

Facsimile: (515) 334-6883